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Serial No.: Not Yet Assigned

Filed: June 24, 1998

Page 80 (New Patent Application)

ABSTRACT OF THE DISCLOSURE

Novel Processes for Amplifying Nucleic Acid, Post-Termination Labeling Process for Nucleic Acid Sequencing and Producing Nucleic Acid Having Decreased Thermodynamic Stability

This invention provides novel processes for amplifying nucleic acid sequences of interest, including linear and non-linear amplification. In linear amplification, a single initial primer or nucleic acid construct is utilized to carry out the amplification process. In non-linear amplification, a first initial primer or nucleic acid construct is employed with a subsequent initial primer or nucleic acid construct. In other non-linear amplification processes provided by this invention, a first initial primer or nucleic acid construct is deployed with a second initial primer or nucleic acid construct to amplify the specific nucleic acid sequence of interest and its complement that are provided. A singular primer or a singular nucleic acid construct capable of non-linear amplification can also be used to carry out nonlinear amplification in accordance with this invention. Post-termination labeling process for nucleic acid sequencing is also disclosed in this invention that is based upon the detection of tagged molecules that are covalently bound to chemically reactive groups provided for chain terminators. A process for producing nucleic acid sequences having decreased thermodynamic stability to complementary sequences is also provided and achieved by this invention. Unique nucleic acid , polymers are also disclosed and provided in addition to other novel compositions, kits and the like.